



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/783,942

02/20/2004

Daniel Brinker

25432-00017

4788

33772

7590

10/31/2006

MCDONALD HOPKINS CO., LPA
2100 BANK ONE CENTER
600 SUPERIOR AVENUE, E.
CLEVELAND, OH 44114-2653

EXAMINER

JIMENEZ, MARC QUEMUEL

ART UNIT

PAPER NUMBER

3726

DATE MAILED: 10/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/783,942

Applicant(s)

BRINKER ET AL.

Examiner

Marc Jimenez

Art Unit

3726

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 October 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 4-7, 11, 14, 16 and 20-33 is/are pending in the application.
- 4a) Of the above claim(s) 30-33 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 4-7, 11, 14, 16 and 20-29 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- ☐ Notice of Informal Patent Application
- ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. **Claims 4-7, 11, 14, 16 and 20-29** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The limitation “wherein the finishing occurs during manufacture of the rotor” added to the claims is considered new matter. There is no support in the original disclosure for finishing during manufacture of the rotor. Although there is support for assembling a brake rotor to the knuckle and hub to form an assembly and then subsequently finishing the brake rotor, the original disclosure does not have support for finishing during manufacture of the rotor because the brake rotor is already made.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. **Claims 20, 24 and 26** are rejected under 35 U.S.C. 102(b) as being anticipated by Wossner.

Wossner teaches a method of manufacturing a brake assembly, comprising: providing a knuckle **41**, a brake rotor **27**, and a hub **26**,

assembling the knuckle **41**, the brake rotor **27**, and the hub **26** together to form an assembly (as shown in figure 2, the knuckle, brake rotor, and hub are assembled together), fixing the assembly to a fixture **5** wherein the hub **26** is driven (by **24,9,11**) such that the hub **26** and the brake rotor **27** rotate (col. 3, lines 43-44) with respect to the knuckle **41**, and finishing (col. 2, line 13) at least one surface of the brake rotor **27** to reduce lateral run-out of the surface of the brake rotor **27**, wherein the rotor is finished while assembled to the knuckle and the hub (col. 1, lines 33-40) and further wherein the finishing occurs during manufacture of the rotor (machining is considered a manufacturing step of the rotor and therefore Wossner is considered to meet the limitation finishing during manufacture of the rotor).

Regarding claims 20 and 26, the whole purpose of refacing a surface of a brake rotor is to smooth out and create unevenness. Therefore, there is parallism between the surface of the brake rotor and brake caliper ears and run-out is minimized.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are

Art Unit: 3726

such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 4-7, 14, 21, 25 and 27-29** are rejected under 35 U.S.C. 103(a) as being unpatentable over Wossner in view of Brinks (US5996454).

Regarding claims 21, 25 and 27, Wossner teaches the invention cited above with the exception of finishing to have a lateral run-out of less than 14micrometer.

Brinks teaches eliminating disc rotor run-out and zero out the stacked tolerances (col. 6, lines 51-54).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Wossner with finishing to have a lateral run-out of less than 14micrometer, in light of the teachings of Brinks, in order to provide a smooth rotor surface that reduces vibration. Also, it would have been obvious to one of ordinary skill in the art at the time of the invention, to have used the claimed ranges, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Regarding claim 14, official notice is taken that it was well known to a person of ordinary skill in the art, at the time of the invention, to have finished the hub prior to securing the brake rotor to the assembly, in order to provide a smooth hub surface.

Regarding claims 4-5, note the bearing retention feature in figure 2 above reference numeral **20** of Wossner.

Regarding claims 6-7, official notice is taken that it was well known to a person of ordinary skill in the art, at the time of the invention, to have provided a snap fit bearing in the bore of the knuckle, in order to provide a smooth rotating wheel.

Regarding claims 28 and 29, the whole purpose of refacing a surface of a brake rotor is to smooth out and create unevenness. Therefore, there is parallism between the surface of the brake rotor and brake caliper ears and run-out is minimized.

7. **Claim 16** is rejected under 35 U.S.C. 103(a) as being unpatentable over Wossner.

Wossner teaches the invention cited above with the exception of press fitting bolts in the holes. However, official notice is taken that it was well known to a person of ordinary skill in the art, at the time of the invention, to have provided a press fit joint, in order to securely fasten the bolts to the receiving holes.

8. **Claims 11, 22 and 23** are rejected under 35 U.S.C. 103(a) as being unpatentable over Wossner in view of Brinks as applied to claim 21 above, and further in view of Kopecko et al. (US4336730).

Wossner/Brinks teach the invention cited above with the exception of the hub comprising a flange portion.

Kopecko et al. teach a hub 5 comprising a flange portion (see figure 3).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the

invention, to have provided the invention of Wossner/Brinks with a hub comprising a flange portion, in light of the teachings of Kopecko et al., in order to provide a hub that can be attached to different sized wheels.

Regarding claims 11 and 23, there are bolt **61** receiving holes.

Response to Arguments

9. Applicant's arguments filed 10-18-06 have been fully considered but they are not persuasive.

10. Applicant argues that the prior art disclosed in Wossner teaches that it is known to finish worn brake rotors by disassembling the knuckle and hub. However, Wossner clearly teaches that the rotors are finished while assembled to the knuckle and hub (col. 1, lines 33-41).

11. Applicant argues that Wossner does not teach finishing the rotor during manufacture of the rotor while the rotor is assembled to the knuckle and hub. However, machining of the rotor is considered a manufacturing step of the rotor and therefore Wossner is considered to meet the limitation "finishing during manufacture of the rotor".

12. Applicant argues that the instant invention is directed to finishing a rotor during manufacture of the rotor, however, there is no support in the original disclosure for finishing the rotor during manufacture of the rotor because the rotor is already made. Therefore, this limitation is considered new matter.

13. Applicant argues that the prior art does not teach singly or in combination of finishing the brake rotor to have a lateral run-out less than 14micrometer, however, Brinks teaches eliminating disc rotor run-out and zero out the stacked tolerances (col. 6, lines 51-54). In addition, it would

Art Unit: 3726

have been obvious to one of ordinary skill in the art at the time of the invention, to have used the claimed ranges, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Conclusion

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Interviews After Final

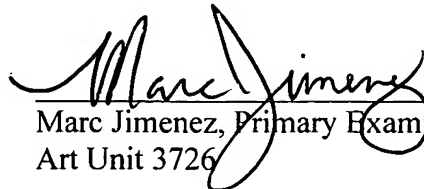
15. Applicant note that an interview after a final rejection will not be granted unless the intended purpose and content of the interview is presented briefly, in writing (the agenda of the interview must be in writing) to clarify issues for appeal requiring only nominal further

consideration. Interviews merely to restate arguments of record or to discuss new limitations will be denied. See MPEP 714.13 and 713.09.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc Jimenez whose telephone number is (571) 272-4530. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bryant can be reached on (571) 272-4526. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Marc Jimenez, Primary Examiner
Art Unit 3726